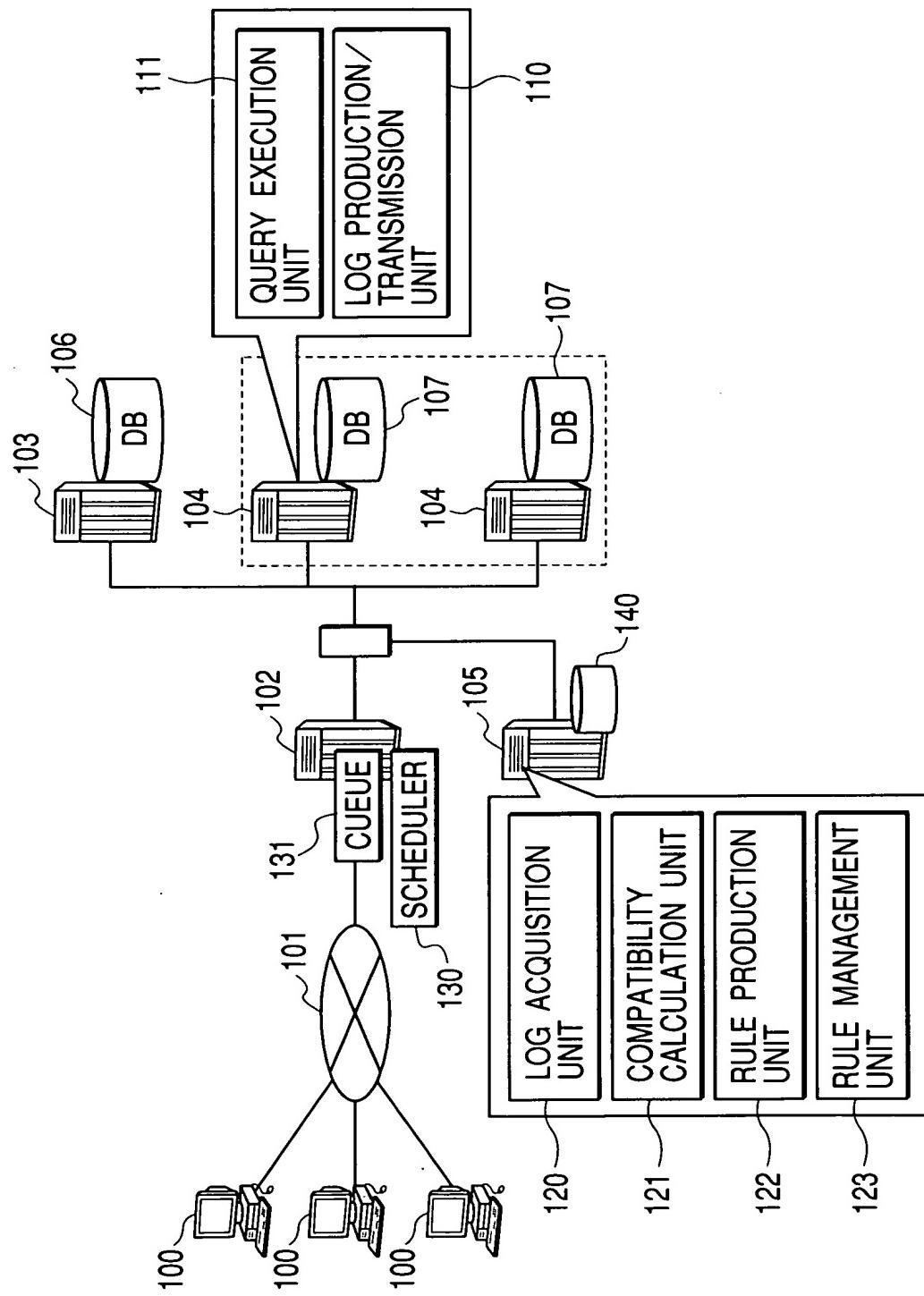
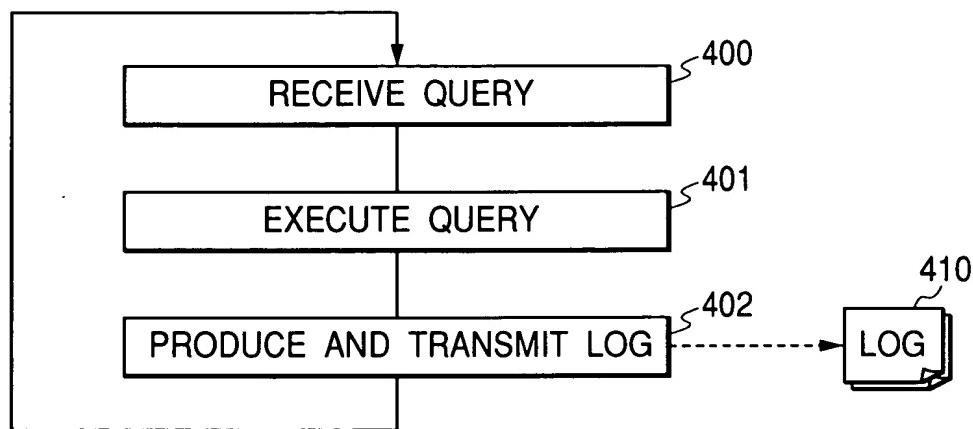


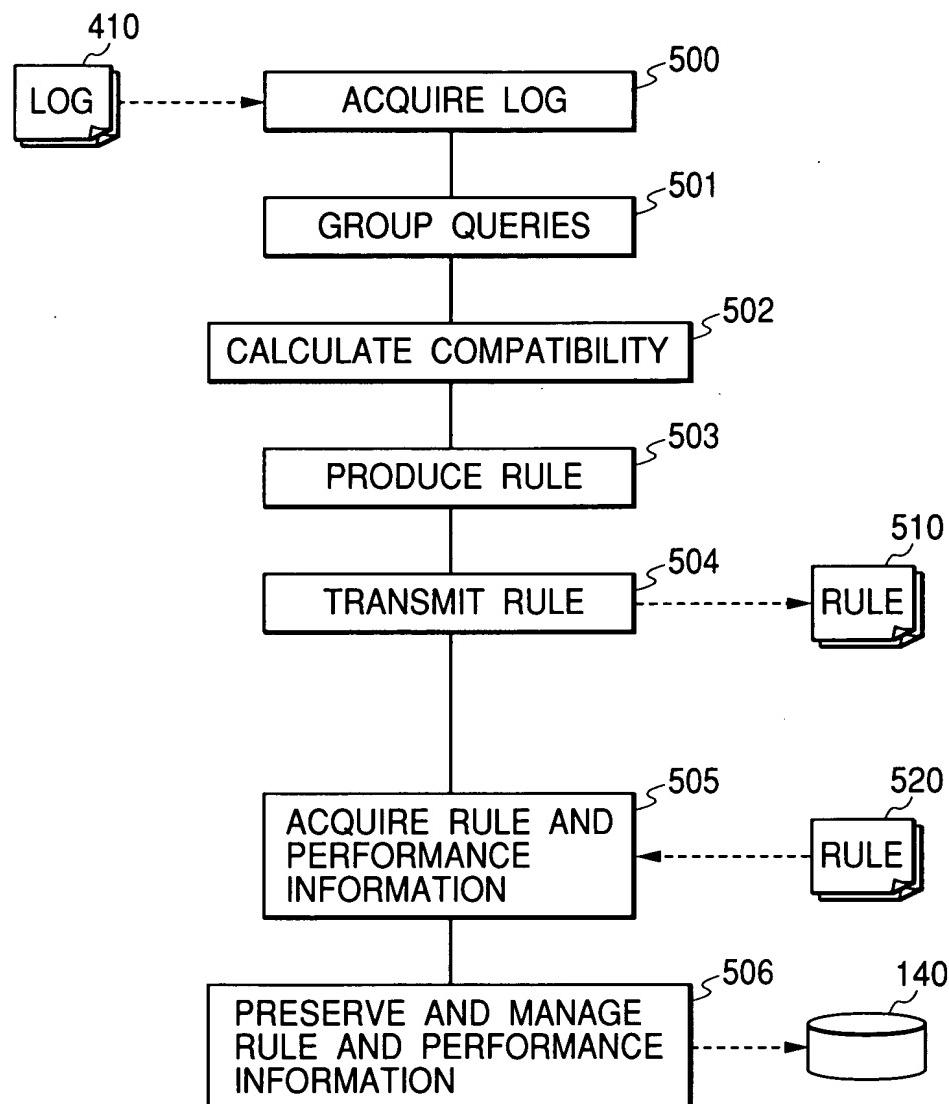
FIG. 1



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FIG. 2**FIG. 3**

700	701	702	703	704
710	CONTENTS OF QUERY	PROCESSING TIME	START TIME INSTANT	END TIME INSTANT
720	select ...	2200	19:05 22.02	19:05 24.22
	select ...	1500	19:05 25.00	19:05 26.50

FIG. 4

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FIG. 5A

EXAMPLE OF GROUPING 1

1050 ~~~~~ 1051

#	TEMPLATE	CONTENTS OF QUERY	
1	A	select a from A where b > 2	1011
		select a, b from A	1012
2	B	select a from B where c > 3	1013
		select a, c from B where b > 3	1014

1010 ~~~~~ 1051

FIG. 5B

EXAMPLE OF GROUPING 2

1050 ~~~~~ 1051

#	TEMPLATE	CONTENTS OF QUERY	
1	{a}, {A}	select a from A where b > 2	1021
		select a from A	1022
2	{a, c}, {A}	select a, c from A where c > 3	1023
		select a, c from A where d > 3	1024

1020 ~~~~~ 1051

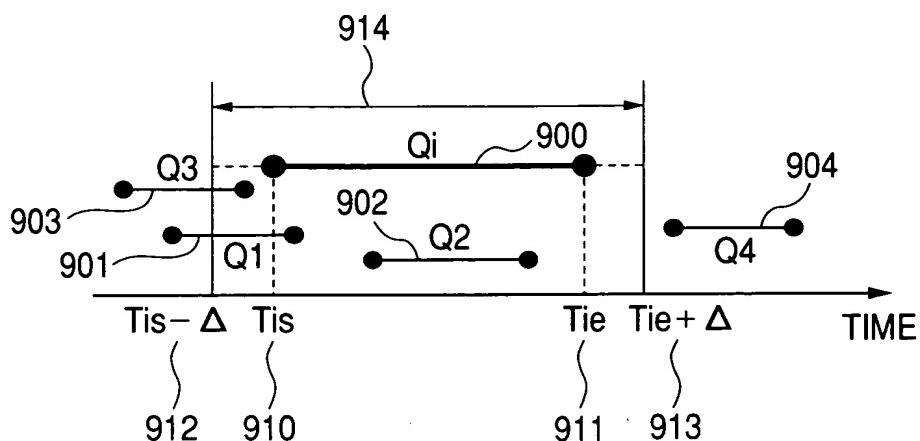
FIG. 5C

EXAMPLE OF GROUPING 3

1050 ~~~~~ 1051

#	TEMPLATE	CONTENTS OF QUERY	
1	{a}, {A}, {b}	select a from A where b > 2	1031
		select a from A where b > 30	1032
2	{a}, {A}, {c}	select a from A where c > 3	1033
		select a from A where c > 5	1034

1030 ~~~~~ 1051

FIG. 6**FIG. 7A**

COMPATIBILITY MATRIX

	Q_1	Q_2	\dots	Q_j	\dots	Q_n	
Q_1							A_1
\dots							\dots
Q_i				C_{ij}			A_i
\dots							\dots
Q_n							A_n

Curved arrows point from labels 800 through 804 to specific cells in the matrix, likely indicating row and column indices or specific matrix entries.

FIG. 7B

CALL MATRIX

	Q_1	Q_2	\dots	Q_j	\dots	Q_n	
Q_1							T_1
\dots							\dots
Q_i					T_{ij}		T_i
\dots							\dots
Q_n							T_n

Curved arrows point from labels 810 through 814 to specific cells in the matrix, likely indicating row and column indices or specific matrix entries.

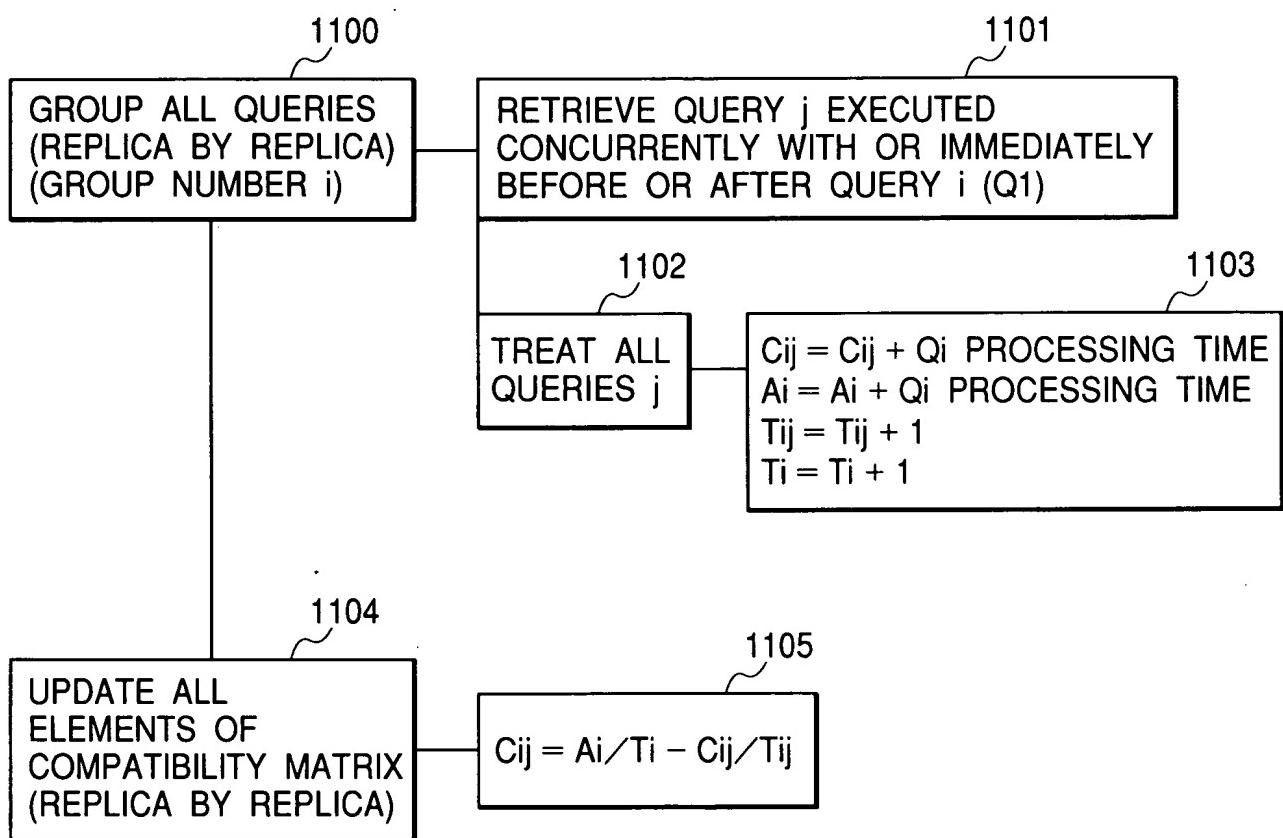
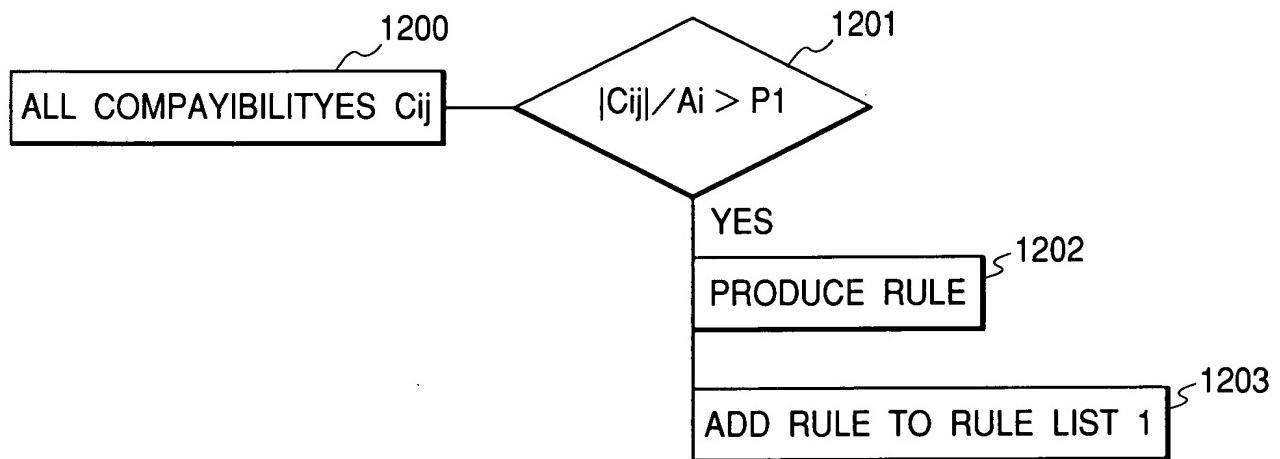
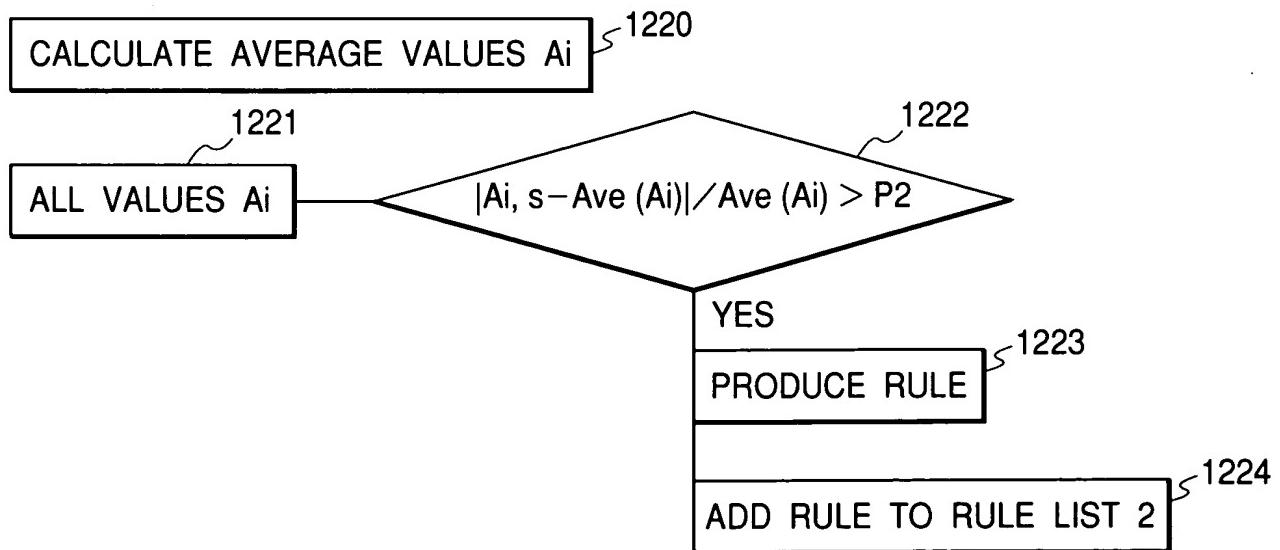
FIG. 8

FIG. 9A

PRODUCING RULE FOR COMPATIBILITY BETWEEN QUERIES

**FIG. 9B**

PRODUCING RULE FOR COMPATIBILITY BETWEEN QUERY AND SERVER



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FIG. 10ARULE LIST 1
(RULE FOR COMPATIBILITY BETWEEN QUERIES)

CONDITION	COMPATIBILITY VALUE	FREQUENCY
Q1, Q2	20	0
Q1, Q7	10	0
...

FIG. 10BRULE LIST 2
(RULE FOR COMPATIBILITY BETWEEN QUERIES)

CONDITION	COMPATIBILITY VALUE	FREQUENCY
Q1, S2	20	0
Q1, S4	-10	0
...

9720

FIG. 11A

COMPATIBILITY MATRIX

801

	Q1	Q2	...	Qj	...	Qn	
Q1							A11
...							...
Qi			Cij				Ai1
...							...
...							...
Qn							An1

802

800

803

REPLICA 1

804

811

803

REPLICA 2

	Q1	Q2	...	Qj	...	Qn	
Q1							A12
...							...
Qi			Cij				Ai2
...							...
...							...
Qn							An2

812

	Q1	Q2	...	Qj	...	Qn	
Q1							T11
...							...
Qi			Tij				Ti1
...							...
...							...
Qn							Tn1

810

814

813

CALL MATRIX

REPLICA 2

	Q1	Q2	...	Qj	...	Qn	
Q1							T12
...							...
Qi			Tij				Ti2
...							...
...							...
Qn							Tn2

REPLICA 3

	Q1	Q2	...	Qj	...	Qn	
Q1							A13
...							...
Qi			Cij				Ai3
...							...
...							...
Qn							An3

	Q1	Q2	...	Qj	...	Qn	
Q1							T13
...							...
Qi			Tij				Ti3
...							...
...							...
Qn							Tn3

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FIG. 12

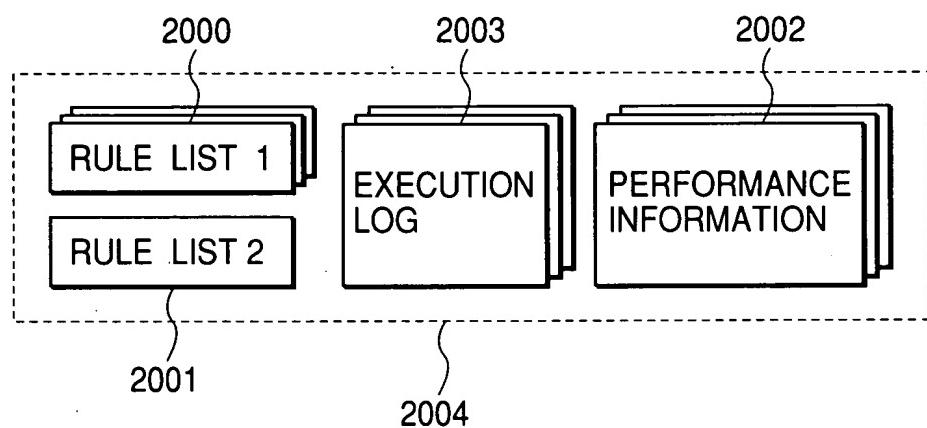
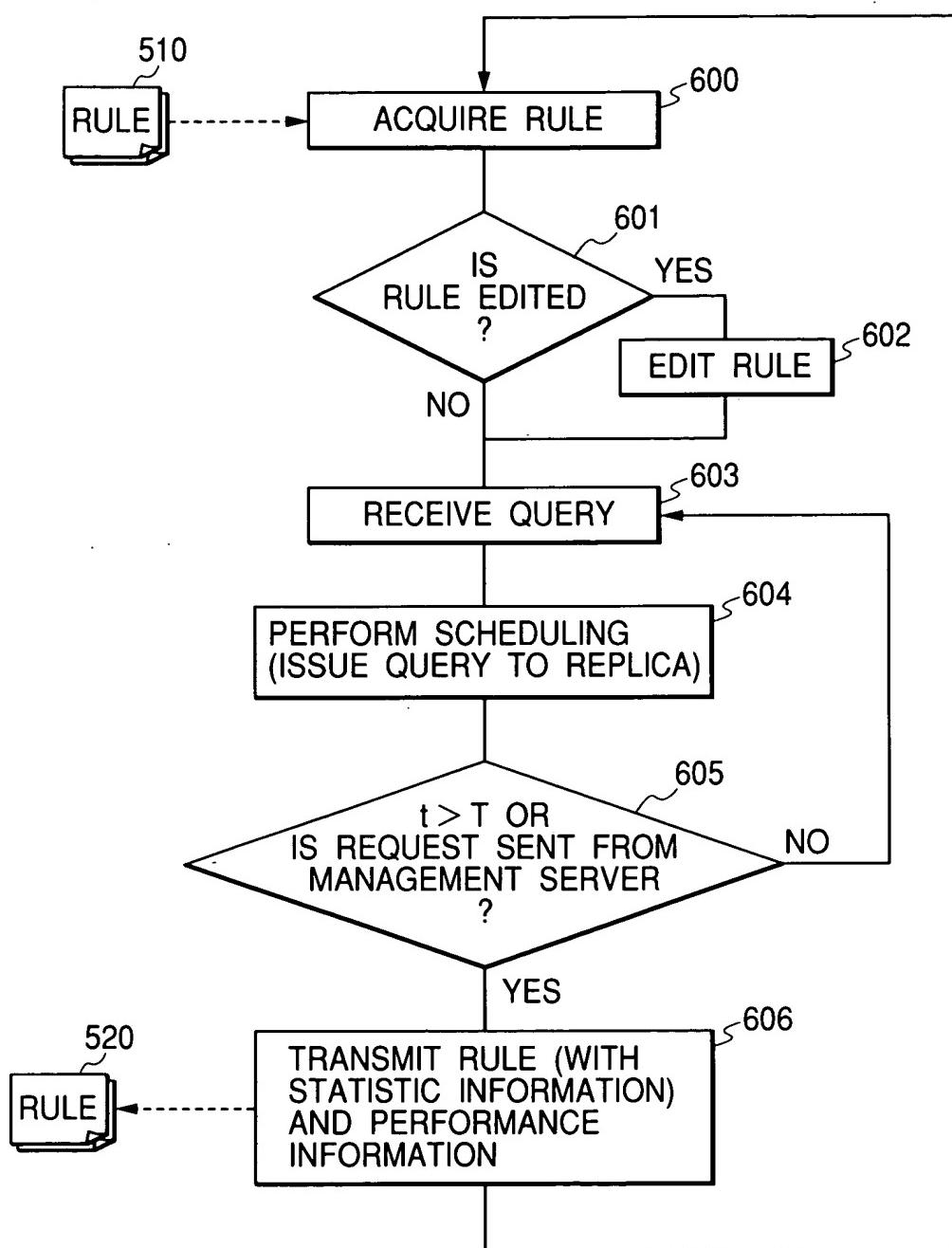


FIG. 13



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FIG. 14

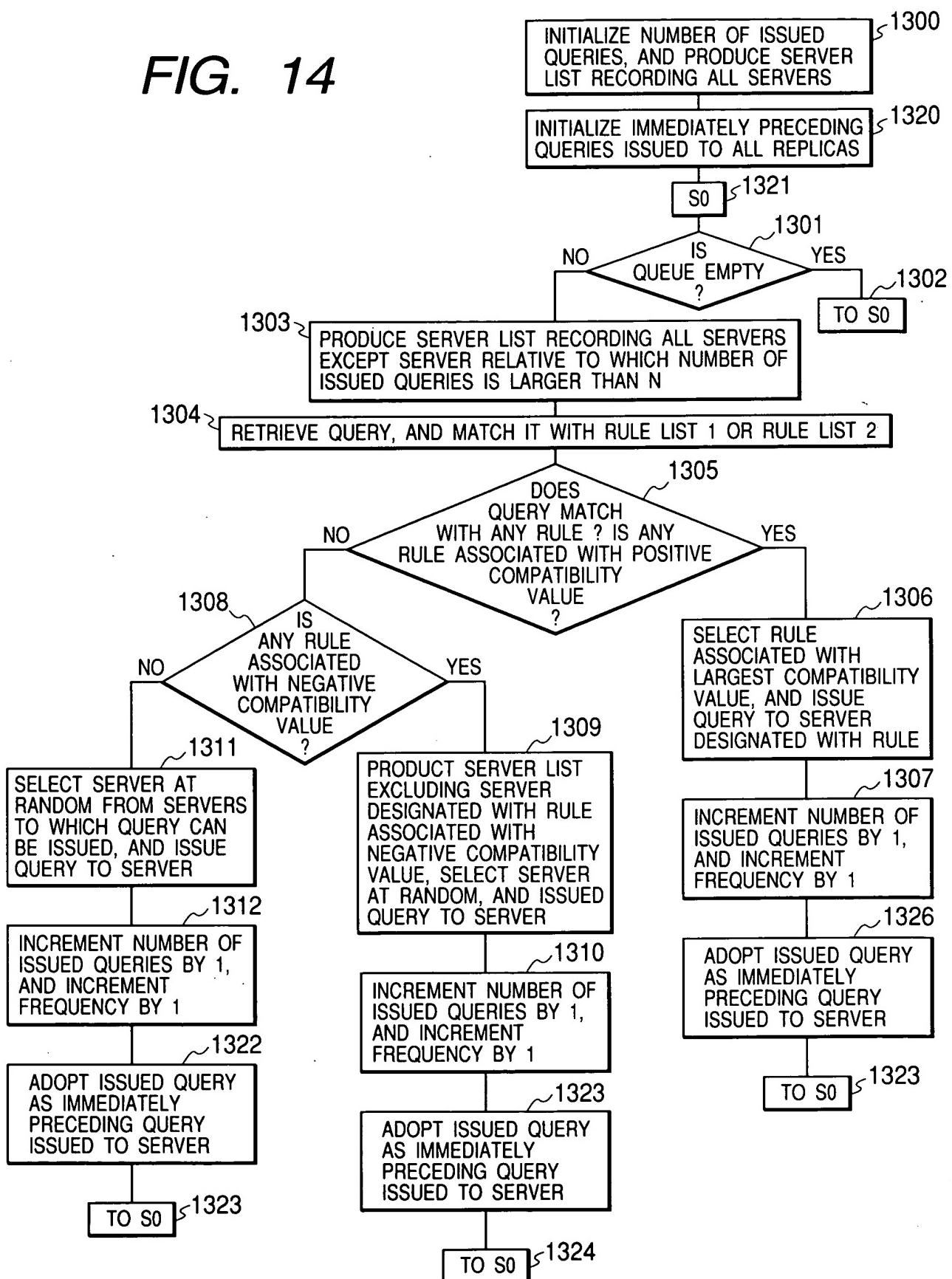


FIG. 15A

CORRELATION MATRIX

	U1	U2	...	Uj	...	Un	
U1							A1
...							...
Ui				Cij			Ai
...							...
...							...
Un							An

Annotations: 2100 (bottom left), 2101 (left side), 2102 (top right), 2103 (right side), 2104 (center).

FIG. 15B

CALL MATRIX

	U1	U2	...	Uj	...	Un	
U1							T1
...							...
Ui					Tij		Ti
...							...
...							...
Un							Tn

Annotations: 2110 (bottom left), 2111 (left side), 2112 (top right), 2113 (right side), 2114 (center).

FIG. 15CRULE LIST 3
(RULE FOR COMPATIBILITY BETWEEN USERS)

CONDITION	COMPATIBILITY VALUE	FREQUENCY
U1, U2	20	0
U1, U4	-10	0
...

Annotations: 2130 (bottom left), 2131 (top left), 2132 (top right), 2133 (left side), 2134 (right side).

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FIG. 16

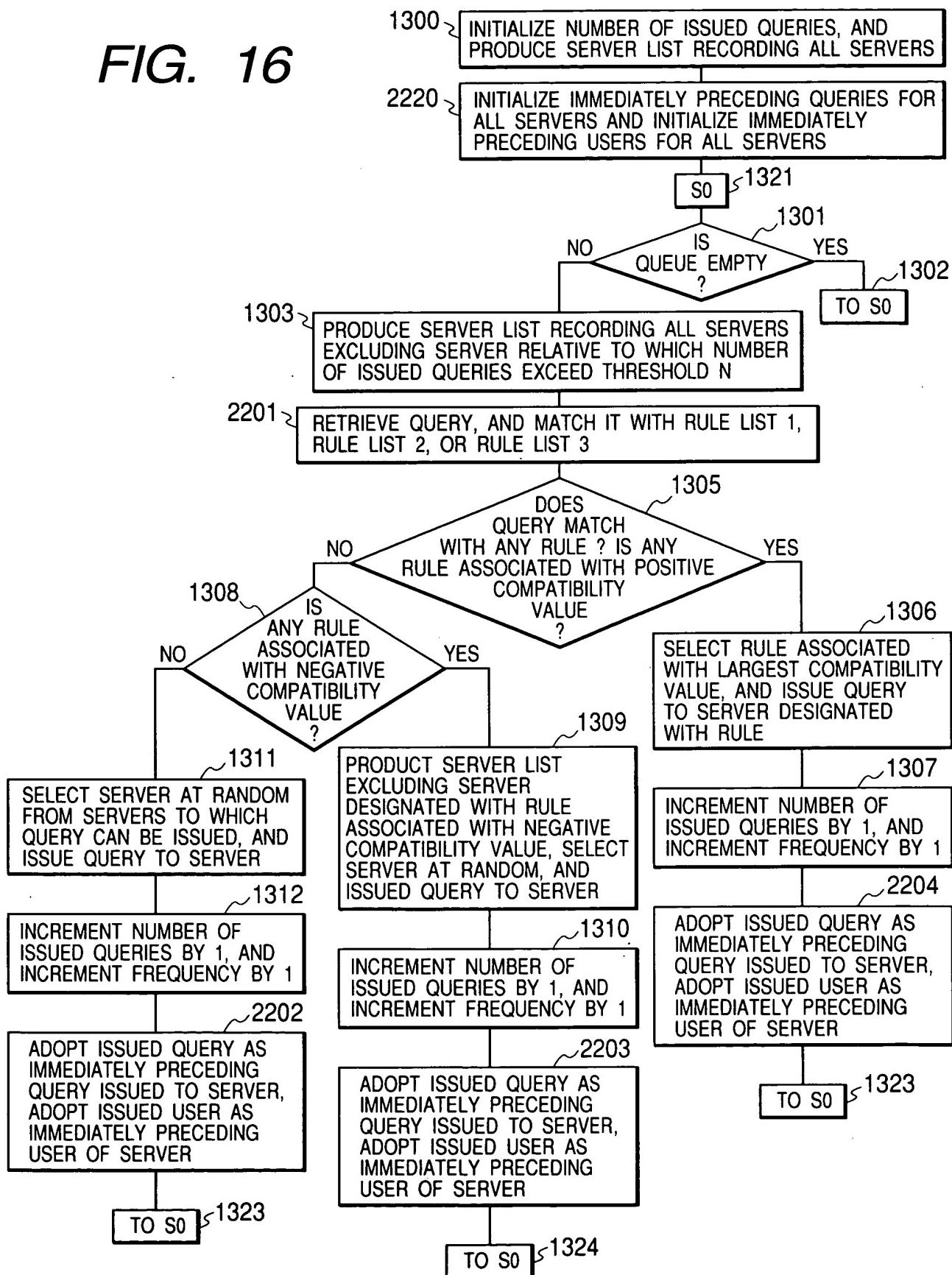
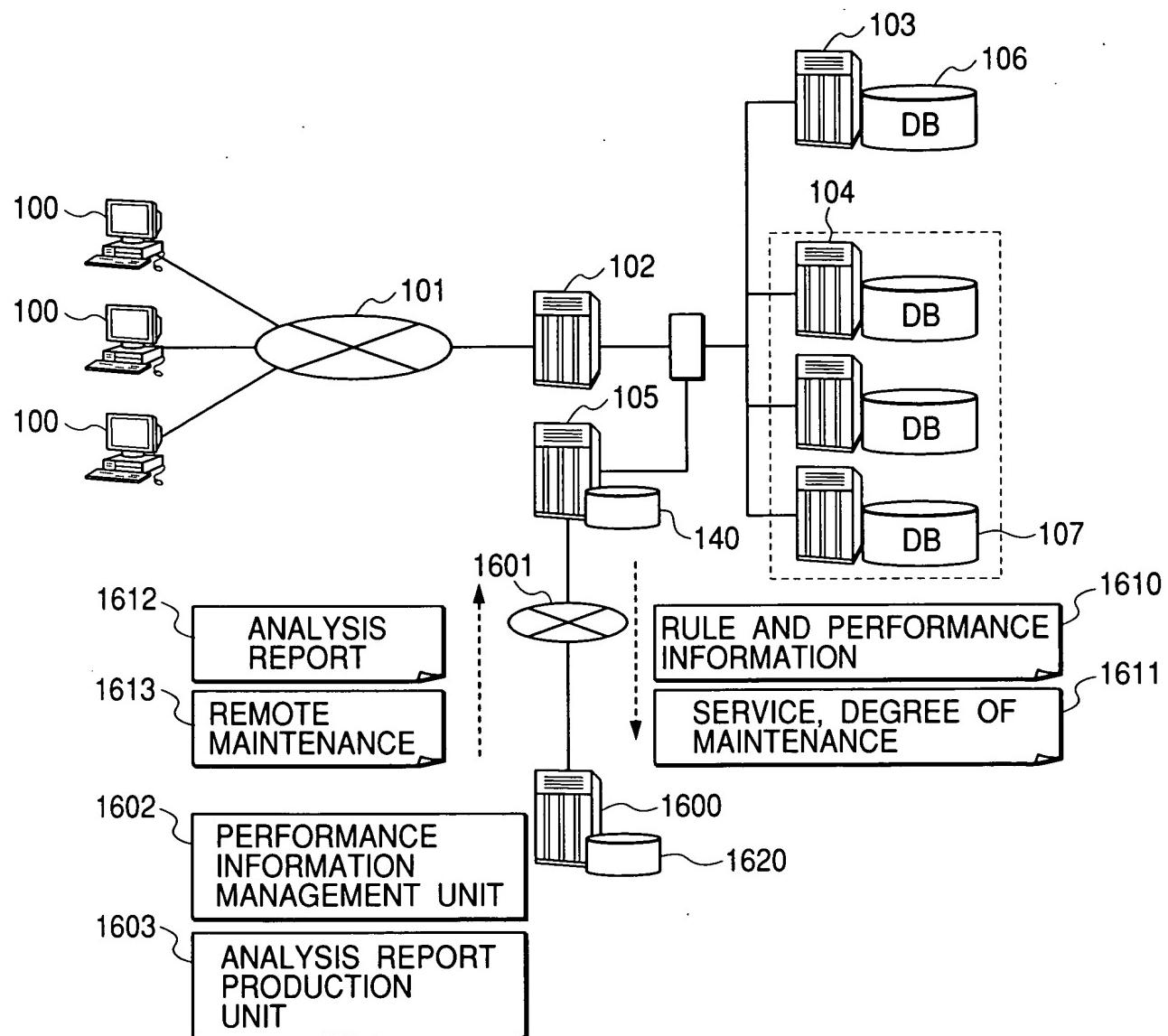


FIG. 17



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FIG. 18

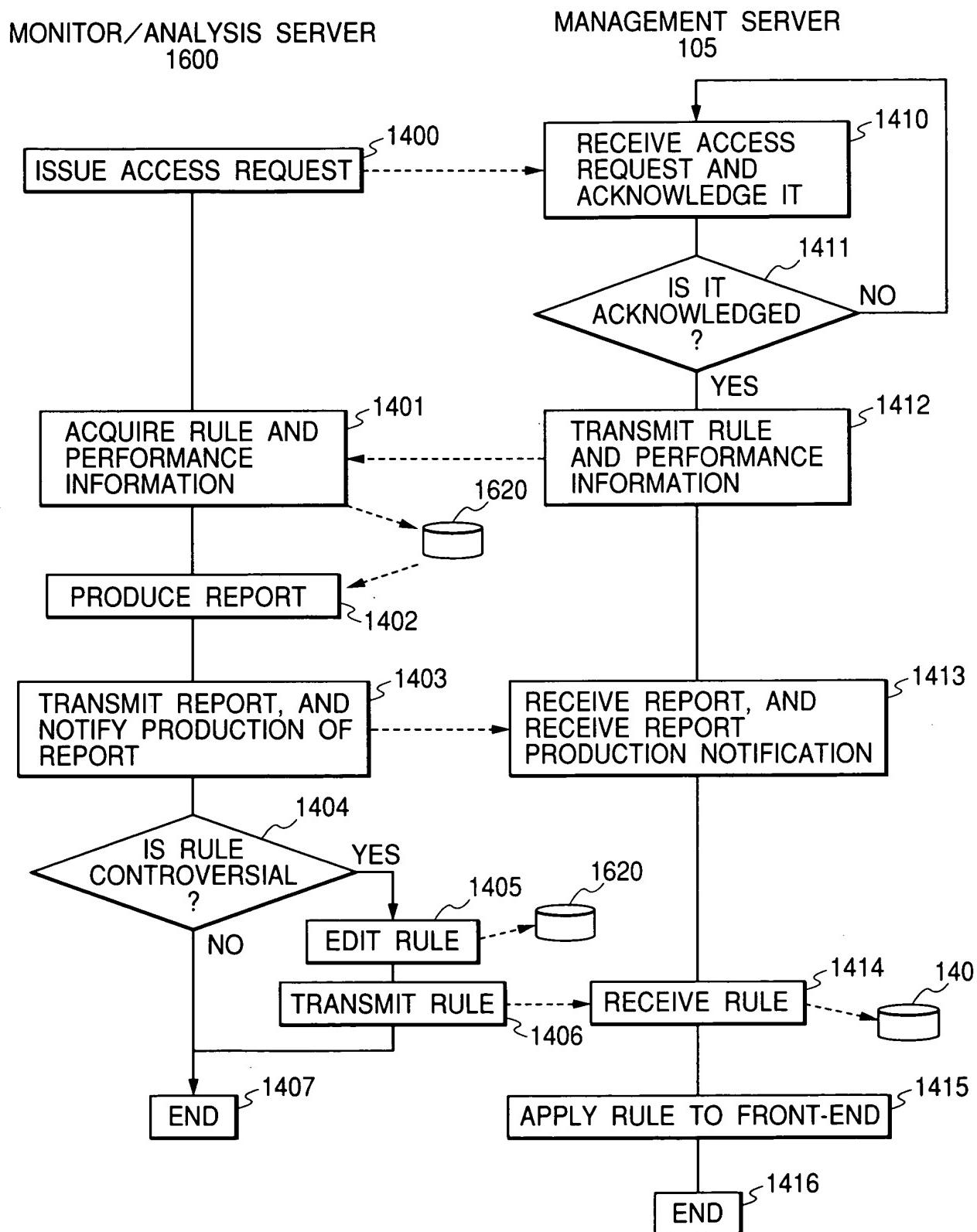


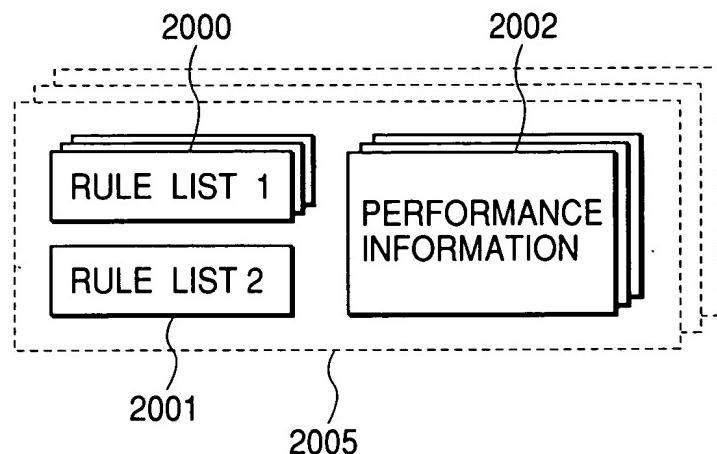
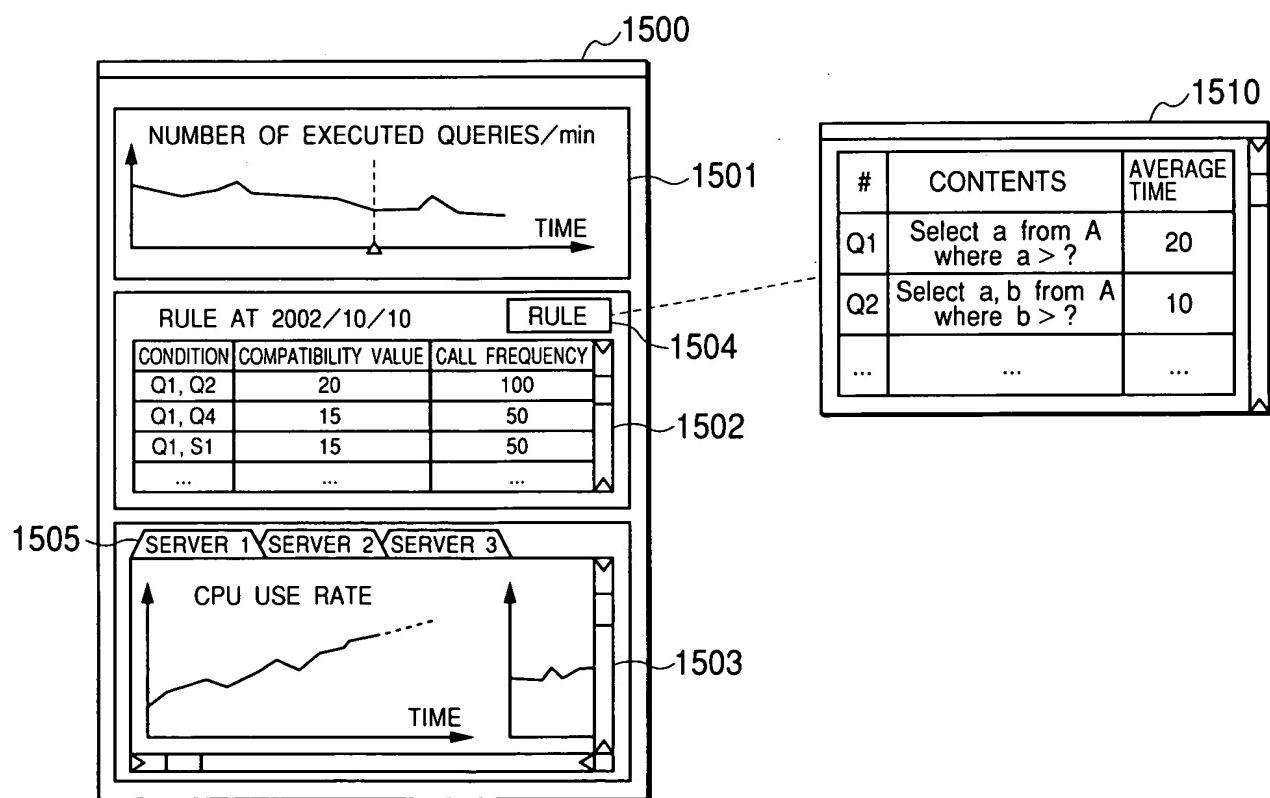
FIG. 19**FIG. 20**

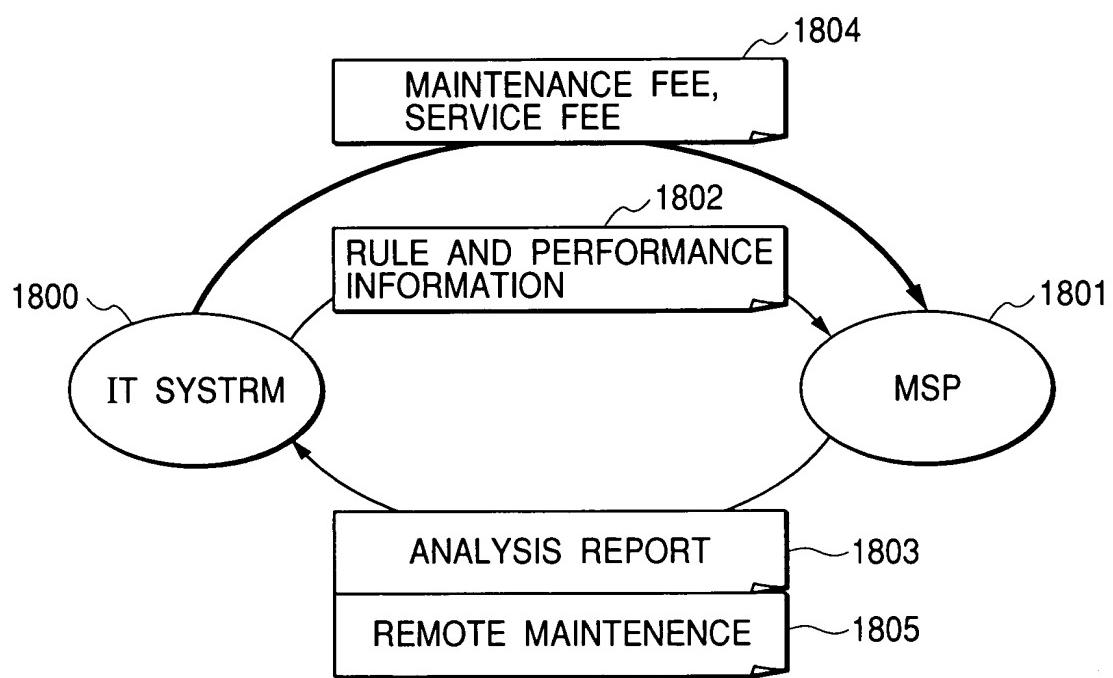
FIG. 21

FIG. 22

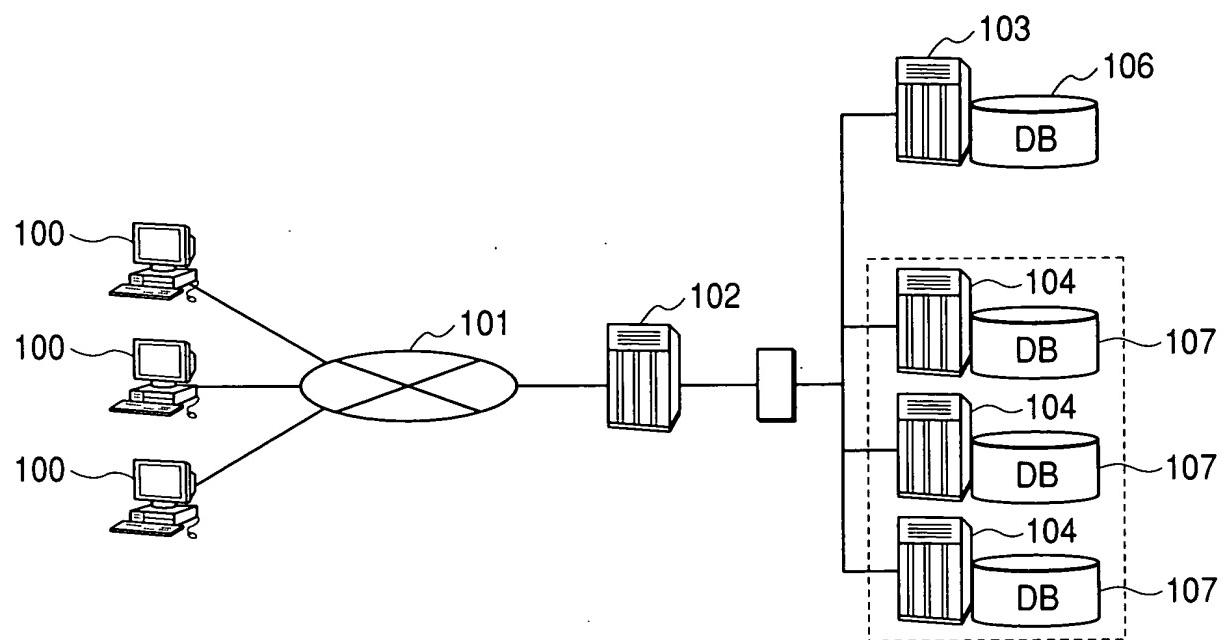
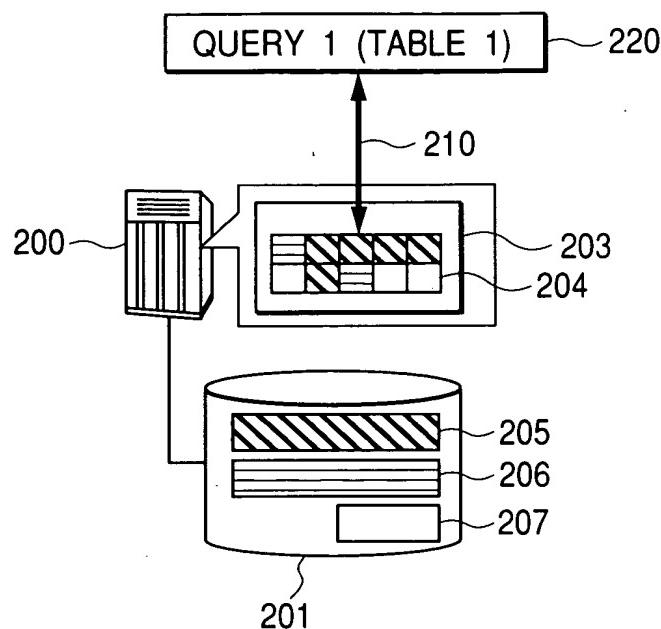
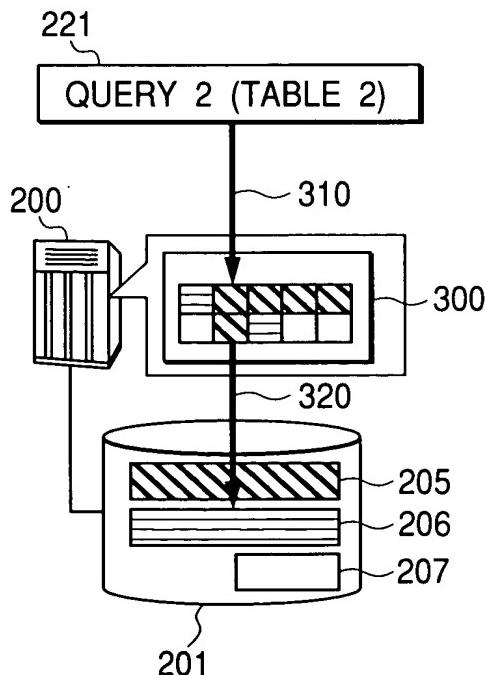


FIG. 23**FIG. 24A****FIG. 24B**